

CHAPTER 12

Alpha-Numeric Sequence Puzzle

In this type of questions, a jumbled sequence of some letters, numbers and symbols is given, followed by certain questions based on it.

The questions asked may be any of the following types :

1. To find elements (letters, numbers or symbols) satisfying certain conditions in the given sequence.
2. To determine the element at a certain given relative position in the sequence.
3. To complete a series consisting of terms formed by a combination of the elements of the sequence, by deciphering the hidden pattern in relation to the position of the elements in the sequence.
4. To find the odd combination among a given set of combinations of elements, by finding the common property which other combinations share as per their positions in the given sequence.
5. To find the analogical relationship between a given pair of combinations of elements, and then find a combination which holds same relationship with another given combination.

Solved Examples

Study the following arrangement of symbols, letters and numbers to answer the questions given below it :

$\delta = \beta F 2 \star K S 7 5 \# \$ P L V 8 @ M U E 6 \uparrow Q G \odot 9 3 \& T Y \epsilon$

Ex.1 How many such letters are there in the arrangements each of which is either immediately preceded by a symbol or immediately followed by a number, but not both?

- (1) Three (2) Four (3) Five (4) None of these

Sol. The letters satisfying the given conditions are shown as under :

$\delta = \beta F 2 \star \boxed{K} \boxed{S} 7 5 \# \$ \boxed{P} L \boxed{V} 8 @ \boxed{M} U \boxed{E} 6 \uparrow \boxed{Q} G \odot 9 3 \& \boxed{T} Y \epsilon$

Clearly, there are 8 such letters.

Hence, the answer is (4).

Ex.2 How many such consonants are there in the above arrangement each of which is immediately followed by a consonant but not immediately preceded by a symbol?

- (1) Nil (2) One (3) Two (4) Three

Sol. We know that of the 26 letters of English alphabet, five letters namely A, E, I, O, U are vowels, while remaining are consonants.

The consonants satisfying the given conditions may be shown as under :

$\delta = \beta F 2 \star K S 7 5 \# \$ P \boxed{L} V 8 @ M U E 6 \uparrow Q G \odot 9 3 \& T Y \epsilon$

Clearly, there is only one such consonant.

Hence, the answer is (2).

Ex.3 Which of the following is exactly in the middle of the ninth from the left end and the fifteenth from the right end in the above arrangement?

- (1) P (2) U (3) E (4) L

Sol. Clearly, counting from the left, the ninth element is 7. Counting from the right, the fifteenth element is @. The character midway between 7 and @ is P.

Hence, the answer is (1).

Ex.4 If all the elements after the middle element in the above arrangement are written in the reverse order, which of the following will be seventh towards right of the twelfth element from the left end?

- (1) U (2) 2 (3) T (4) 6

Sol. The middle element in the given arrangement is 8. Writing all the elements after 8 in the reverse order, we get the following sequence :

$\delta = \beta F 2 \star K S 7 5 \# \$ P L V 8 E Y T \& 3 9 @ G Q \uparrow 6 E U M @$

Counting from the left in the above sequence, the twelfth element is \$. The seventh element to the right of \$ is T. Hence, the answer is (3).

Ex.5 Which of the following groups of elements will come in place of the question mark in the series of elements given below ?

K 2 δ 5 S F P # K ? U @ P

- (1) 8 L 5 (2) @ V # (3) V P 7 (4) 8 \$ 5

Sol. Clearly, first and second elements of each term move two steps and four steps backward respectively to give the second and third elements of the same term. The third element of each term moves nine steps forward to give the first element of the next term. The pattern is repeated in the subsequent terms.

Now, the letter 9 steps ahead of K is 8; the letter 2 steps behind 8 is L and the letter 4 steps behind L is 5. Thus, the missing term is 8 L 5. Hence, the answer is (1).

Ex.6 Based on the positions in the above arrangement, if $\beta F \delta : T \& E$, then $K \star 7 : ?$

- (1) @ 9 Q (2) @ G Q (3) 9 @ Q (4) @ 9 \uparrow

Sol. Observing the given analogous pair, we find that the corresponding elements of both the terms occupy the same position from the beginning and end of the given arrangement.

Now, K, and \star and 7 are respectively 7th, 6th and 9th elements from the left end in the given arrangement. The 7th, 6th and 9th elements from the right end are @, 9 and Q respectively. Thus, the missing term is @ 9 Q.

Hence, the answer is (1).

EXERCISE

Directions (Q.1 to Q.5) : Study the following arrangement carefully and answer the questions given below.

R E 5 D A P \$ 3 T I Q 7 9 B # 2 K % U 1 M W 4 @ \star J 18 N

- Which of the following is exactly in the middle of 3 and 1?

(1) B (2) K (3) 9 (4) #
- How many such numbers are there in the given arrangement, each of which is immediately preceded by a consonant and not immediately followed by a consonant?

(1) None (2) One (3) Two (4) Three
- How many such vowels are there in the given arrangement, each of which is immediately followed by a number but not immediately preceded by a consonant?

(1) None (2) One (3) Two (4) Three
- Which of the following is seventh to the left of the sixteenth from the left in the given arrangement?

(1) A (2) U (3) 4 (4) T

5. Three of the following four are alike in a certain way based on their position in the above arrangement and so form a group. Which is the one that does not belong to that group ??

(1) B 2 7 (2) M 4 U (3) D P E (4) W J 1

Directions (Q .6 & Q.7) : Study the following arrangement carefully and answer the questions given below:

R * t J L 2 \$ D = M # 8 C % B < K 1 & A W ? P E + Q @ 7 F 6

6. How many such numbers are there in the given sequence, each of which is immediately preceded by a consonant and immediately followed by a symbol?
- (1) Nil (2) One (3) Two (4) Four
7. Which of the following is sixth to the left of eighteenth element from the left?
- (1) % (2) C (3) 1 (4) 8

Directions (Q .8 to Q.12) : Study the following arrangement carefully and answer the questions given below:

E F G B D M 4 N K H 2 A C Z S V 3 F 1 J L O Q 5 P R

8. It is possible to make a meaningful word with the first, the twelfth, the fifteenth and the twenty-first letters, then which of the following will be the first letter of that word? if on such word can be made, give X as your answer and if more than one such words can be made, give M as your answer.
- (1) E (2) T (3) X (4) M
9. What should come in place of question mark in the following sequence?

G D R B M P D 4 5

- (1) M N Q (2) 4 N Q (3) M K O (4) M 4 Q
10. If the letters/numbers only from M to L are written in the reverse order and the other letters/numbers are kept unaltered, then which letter will be the third to the right of 17th letter/number from the right?
- (1) A (2) C (3) S (4) Z
11. If every third letter/number starting from the right replaces successive days of the week starting from Monday, then which letter will replace Thursday?
- (1) A (2) F (3) S (4) Z
12. If every alternate letter/number is dropped starting from E onwards, then which letter/number will be the second to the left the tenth letter/number from the left?
- (1) A (2) B (3) Q (4) V

Directions (Q.13 to Q.15) : Answer the questions given below on the basis of the letter-number sequence given below :

B 3 K G 5 P D 7 9 E R J I M T 6 Z H Q 3 W 2 A

13. Which of the following term is exactly in the middle of 8th term from left and 10th term from the right ?
- (1) R (2) E (3) S (4) q
14. Which of the following letter/number is in the 7th position to the right of the 18th position from the right end ?
- (1) I (2) K (3) J (4) M
15. Three of the following four are alike in a certain way as regard to their position in the given sequence. Which is the one that does not belong to the other three ?
- (1) 3GD (2) IR7 (3) M6Q (4) 6HW



BRAIN TEASERS

Directions (Q.16 to Q.20) : Study the following arrangement carefully and answer the questions given below

Y W @ 1 & C N 3 P L B 9 ↑ = D ★ E 2 E M V \$ 7 # 4 F G 5

16. How many such symbols are there in the above arrangement which are not immediately preceded by a number and also not immediately followed by a letter?
 (1) Nil (2) One (3) Two (4) Three
17. C 1 3 W : 7 4 V G in the same way as N @ B = : ?
 (1) \$ F 2 D (2) V F 2 D (3) \$ F 2 ★ (4) \$ F 2 D
18. If the numbers immediately preceding the symbols are attached the value double their numerical value, then what will be the sum of the values of all such numbers?
 (1) 22 (2) 26 (3) 38 (4) 54
19. Three of the given groups are alike in a certain way based on the above arrangement. Which one does not belong to the group ?
 (1) ★ V 2 M (2) ↑ 2 D E (3) L D B = (4) V F 7 4
20. If Y W @ 1 are written in the reverse order, & C N 3 are written in the reverse order and so on, then in the new arrangement which of the following will be exactly in the middle between 9 and \$?
 (1) ↑ (2) = (3) D (4) M

ANSWERS

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	1	3	2	4	4	3	4	4	1	4	3	4	1	1	2	3	4	3	4	1

EXERCISE

QUESTIONS RELATED TO VARIOUS OLYMPIADS

1. Which of the following letter/numbers in the given letter-number sequence below is exactly in the middle of the 9th letter/number from the left end and 7th letter/ number from the right end ?

B 3 K G 5 P D 7 9 E R J I M T 6 Z H Q 3 W 2 A

- (1) I (2) R (3) J (4) M

2. Look at the symbol-letter-number sequence given below.

2 P J @ 8 \$ L B 1 V # Q 6 8 G W 9 K C D 3 © • £ 5 F R 7 A Y 4

Three of the following four are similar in relation to their positions in the above sequence and hence form a group. Which one does not belong to that group?

- (1) Q K 5 (2) L 6 D (3) P L 8 (4) 1 G ©

3. Study the following arrangement carefully and answer the question given below:

M J % 4 T E K I 9 # P A \$ Q 3 8 N 5 U 7 W * B @ D F © 1 Z 6 H

What should come in place of question mark in the following series based on the above arrangement?

J 4 E I # A Q 8 5 7 * @ ?

- (1) F 1 6 (2) D © G (3) F © 6 (4) F 1 Z

ANSWERS

Que.	1	2	3
Ans.	1	3	3